Subject: Re: The good way to use cdfid's
Posted by Jos de Laat on Mon, 20 Jun 2011 13:42:20 GMT
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Dear Fabzou,

I think I ran into a similar problem some time ago. I had a piece of
IDL that subsequently opens and reads data from many - albeit
different - NCDF files in IDL. This always worked well, but after the
operating system of my workstation changed to Fedora 13 my IDL program
started to "stall", it simply stopped running and could only be
stopped by killing idl ("ctrl C" did not work; happens in both IDL v70
and v80). This occurs a bit randomly, but it always happens. After
some fiddling around it turned out that opening and closing any NCDF
files for many times leads to this error. This was also the case for
HDF and HDF5 files. Interestingly, the problem did not occur for IDL
running under windows (IDL v64, I think).

I contacted ITTVIS about it and they gave me the following code
example "that caused a crash on several linux flavours:" (their
words):

```
pro create_hand_sample,  file
  compile_opt idl2, logical_predicate
  print, file
  sample_var =  dindgen( 4, 3 )
  ncid = ncdf_create(file, /CLOBBER)
  dimidx = ncdf_dimdef( ncid, 'x', 4 )
  dimidy = ncdf_dimdef( ncid, 'y', 3 )
  varid = ncdf_vardef( ncid,  'variable', /double )
  ncdf_control, ncid, /ENDEF
  ncdf_varput,  ncid,  varid, sample_var
  ncdf_close,  ncid

end

pro crash_ncdf
  compile_opt idl2, logical_predicate

  catch,  theError
  print, 'theError = ',theError
  if theError ne 0 then begin
    Catch, /cancel
    print,  "i = ",  i
    print,  "ncdf_fid = ",  ncdf_fid
    message,  !ERROR_STATE.msg
  endif
```

```
file = '/tmp/sample_hand.nc'
create_hand_sample, file

long_iteration = 19000000L

for i = 0l, long_iteration do begin
  ncdf_fid = ncdf_open( file, write = 0 )
  ncdf_close, ncdf_fid
endfor

print, 'Successfully completed first iterations'
window, /free
wdelete

for i = 0l, long_iteration do begin
  ncdf_fid = ncdf_open( file, write = 0 )
  ncdf_close, ncdf_fid
endfor

print, 'Successfully completed second iterations'

end
```

```
theError =       -1091
ncdf_fid =       65536
% CRASH_NCDF: NCDF_OPEN: Unable to open the file "/tmp/
sample_hand.nc". (NC_ERROR=-31)
% Execution halted at: CRASH_NCDF        24 /usr/people/laatdej/
Documents/tmp/ITT_sample_code.pro
%                 CREATE_HAND_SAMPLE    3 /usr/people/laatdej/
Documents/tmp/ITT_sample_code.pro
%                 $MAIN$
```

...

They promised to look into this but I haven't heard since (so mailed them again today). I'll keep you posted if a solution is found.